Kyle Opperman

contact@kayoh.dev +(0) 31 6 10 47 25 53 Haarlem, NL

Frontend Architect & Engineering Lead with 13+ years of experience designing and scaling complex web applications, developer platforms, and real-time interfaces across fintech, logistics, and enterprise environments. I specialise in TypeScript, React, Web Components, system design, and cross-team technical leadership. Passionate about building high-quality software that blends performance, clarity, and usability, I thrive in environments where I can be hands-on while also setting direction, mentoring engineers, and elevating the overall engineering craft.

Skills

Languages	Typescript, JavaScript, CSS, HTML, SQL
Frameworks & Libraries	Lit, Web Components, React, Vue.js, Sass/SCSS, Next.js, Node.js, Knockout.js, Riot.js, jQuery, Web Components, RxJS, React Query, Redux, Vuex, D3.js, NestJS, GraphQL
Testing & QA	Playwright, Cypress, Jest, Karma, Vitest, Lighthouse, Sentry
CI/CD & Cloud	Azure DevOps, AWS, GCloud, Firebase, Serverless, Docker
Build Tooling	Turborepo, Nx, Webpack, Rollup, Vite, Parcel, Turbopack. Lerna
Other	Blue Security Champion, a11y, i18n, WCAG, Backstage.io, SEO, Design Systems, Phaser, Godot, Unreal Engine

Experience

Principal Frontend Engineer, Nebul - Leiden, NL **June 2026 - Present**

Lead Software Engineer (IV), ING - Amsterdam, NL **Oct 2024 - June 2026**

React, Lit, Web Components, a11y, i18n, Node.js, Backstage.io, Azure DevOps, TypeScript, Design Systems, Unit Testing, Agile/Scrum

- Architected a cross-framework UI integration layer using Web Components and React, enabling scalable component adoption across the organisation.
- Defined accessibility and internationalisation standards across platform components, ensuring WCAG compliance and multi-language support.
- Designed and delivered a service-graph visualisation system enabling engineers to explore API and service relationships.
- Led architectural migration efforts for legacy developer-portal features into a cohesive, scalable platform.
- Member of platform-level technical alignment groups, ensuring consistency between design, engineering, and architecture strategy.
- Reduced architectural debt through API standardisation, documentation improvements, and systematic component refactoring.

Lead Software Engineer, Embed - Amsterdam, NL **Jul 2023 - Oct 2024**

React, Next.js, NestJS, AWS, Webpack, Turborepo, Nx, Web Components, TypeScript, Playwright, Unit Testing, Agile/Scrum

- Designed and owned the architecture of a framework-agnostic payment SDK using Web Components and TypeScript.
- Led creation of a white-label theming system using design tokens, balancing brand flexibility with compliance.
- Defined engineering standards, CI pipelines, and testing strategy across the frontend stack.
- Collaborated closely with backend teams to structure APIs, shape integration guidelines, and ensure smooth partner onboarding.
- Balanced product velocity with frontend security, cross-domain concerns, and regulatory requirements.

Lead Software Engineer, Flink - Wrocław, PL **Apr 2021 - Jul 2023**

React, React Query, Parcel, Vite, GraphQL, Serverless, Lerna, Firebase, GCloud, TypeScript, Jest, Agile/Scrum

- Introduced micro-frontend architecture enabling independent deployment across product teams.
- Established shared UI libraries and frontend standards within a monorepo.
- Collaborated with product stakeholders to prioritise features based on measurable business impact.
- Mentored engineers and led frontend guild initiatives.
- Implemented delivery optimisation features reducing operational pressure and improving rider efficiency.
- Built internal operational tools for branch management and performance tracking.

Senior Software Engineer, Sennder - Wrocław, PL **Mar 2020 - Apr 2021**

Vue.js, Webpack, AWS, TypeScript, Unit Testing, Agile/Scrum

- Developed a range of frontend applications using Vue.js, including brokerage, discovery, and chartering systems that streamlined company operations.
- Collaborated with cross-functional teams to identify requirements, set timelines, and ensure seamless integration of developed applications with existing systems.
- Introduced DataDog, enhancing monitoring and observability capabilities.

Team Lead, Leadhome - Johannesburg, ZA **Mar 2018 - Feb 2020**

React, GraphQL, Node.js, Styled Components, AWS, TypeScript, Jest, Agile/Scrum

- Collaborated with cross-functional teams to align technical solutions with business goals, improving stakeholder satisfaction and project delivery.
- Successfully developed and launched a custom CRM to replace the outdated Salesforce system within nine months, setting the foundation for the company's growth.
- Scaled the development team from three to over twelve members, fostering a collaborative and productive working environment.
- Oversaw the successful launch of four products and numerous iterations on each, contributing to Leadhome's rapid growth and industry disruption.

Intermediate Software Engineer, iflix - Cape Town, ZA **Feb 2017 - Feb 2018**

Vue.js, Riot.js, Node.js, Serverless, AWS, TypeScript, Unit Testing, Agile/Scrum

- Developed and integrated serverless architecture for the majority of our planned systems, ensuring scalability, efficiency, and cost-effectiveness.
- Collaborated with third-party payment providers (CSG) to enable seamless transactions and broaden the range of available payment options for customers in diverse regions.
- Delivered end-user systems as a frontend focused developer, creating user interfaces that are intuitive, visually appealing, and easy to navigate.
- Established weekly meetings with the global web development team to address the monolithic structure created due to the startup nature of the company, streamlining processes and promoting collaboration.
- Successfully implemented unique and impactful payment solutions, contributing to iflix's expansion and customer satisfaction in the African and Asian markets.

Front End Developer, The Gemini Solution - Cape Town, ZA **Dec 2015 - Feb 2017**

jQuery, knockout.js, D3.js, Node.js, GCloud, Firebase

- Collaborated closely with outsourced designers to set expectations and timelines for interface development, ensuring efficient project delivery and high-quality user experiences.
- Developed an innovative survey tool based on industrial psychology research and user engagement, incorporating a variety of question types from free text to interactive games.
- Created several engaging 'brain' games using the Phaser framework, providing users with a unique and enjoyable survey-taking experience.
- Utilised D3.js to render metrics and graphs for the data collected, offering insightful visualisations to help users make sense of the information gathered.

Front End Developer, Platinum Software **-** Johannesburg, ZA **Feb 2013 - Dec 2015**

jQuery, knockout.js, Node.js, PostgresQL

- Designed and implemented visually appealing and functional user interfaces using Javascript (Knockout/jQuery), providing users with an intuitive and engaging experience.
- Configured and monitored server health, ensuring optimal performance and reliability for the company's web applications.
- Collaborated with team members to develop non-existent systems from the ground up, contributing to the establishment and growth of the company.
- Gained a broad range of skills and experience in various aspects of software development, from frontend design to back-end server management.

Personal Projects

Website - https://kayoh.dev/

- Personal website featuring web experiments and links.

Photography - https://unsplash.com/@kayoh_

- Publish royalty-free photographs and volunteer to photograph art, charity, and fundraiser events, combining technical and creative skills.

Void Beneath - https://voidbeneath.itch.io/voidbeneath (Unreal engine)

- Led project management and UI/gameplay development for a game jam project, exploring Unreal Engine tools and C#.

The Quest of Helmet - https://kayoh.itch.io/helmet **(**Phaser3**)**

- Developed a short side-scroller game in 6 hours for a game jam, focusing on rapid prototyping and clean UI implementation.

Ebb & flow - https://github.com/MrOpperman/ebb-flow (Phaser2)

- Built a mini-game where players decode fish directions/movement using arrow keys, inspired by Lumosity-style games. Highlights: state management, responsive input, and Phaser 2.

Education & Courses

Formal Education

- **BSc Computer Science** (partial) | UNISA | 2014–2017
- **High School Diploma** | Abbotts College Pretoria | 2007–2011

Courses & Certifications

- **Blue Security Champions** | Secure Flag | 2025
- **Programme in Business Communication** | UNISA | 2017
- **Introduction to Internet and Web Design** | UNISA | 2013